2007-11

SITREP: The NPS Maritime Defense and Security Research Program Newsletter ; v. 24 (November 2007)

Naval Postgraduate School (U.S.). Maritime Defense and Security Research Program

"To dissuade and defeat threats as early and as far from U.S. borders as possible."

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THE NPS MARITIME DEFENSE AND SECURITY RESEARCH PROGRAM NEWSLETTER

Volume 24
November 2007

TNT & Maritime Interdiction Operations

Dr,. Alex Bordetsky, Principal Investigator for TNT MIO Experiments, Director, Center for Network Innovation and Experimentation

Dr. Bordetsky right, Oakland Police Sergeant Dave Schwoegler left

Since 2005 the NPS TNT Experimentation team jointly with the LLNL is conducting a series of globally distributed Maritime Interdiction Operation (MIO) experiments and developing the MIO testbed. The faculty and students at the Center for Network Innovation and Experimentation (CENETIX) are operating the MIO testbed and constitute the core of the experimentation team.

The objective of these experiments is to evaluate the use of networks, advanced sensors, and collaborative technology for conducting rapid Maritime Interdiction Operations (MIOs). Specifically, we are exploring the ability of a boarding party to rapidly set up ship-to-ship communications that permit them search for radiation/explosive sources and conduct biometrics identification, while maintaining contact with the mother ship, command and control organizations, and to collaborate with remotely-located sensor experts. Geographically distributed command centers and subject matter experts collaborate with the boarding party in real time to facilitate situational understanding and course of action selection.

The MIO testbed provides boarding parties with self-forming wireless mesh links for data communications while taking biometrics or searching nuclear materials across and under the decks as well as while on the move in a high-speed delivery boat. The testbed provides for global reachback to LLNL, Port Authority Ny-NJ, Army Biometrics Fusion Center and overseas sites in Sweden, Austria, Germany, and Singapore as spokes. The new sites are underway in Denmark and Black Sea area (Bosporus).

The particular focus of the last TNT MIO 07-4 was on the networking and data sharing solutions, which enable multiple small craft interdiction and rapid response to the nuclear radiation threat associated with the devices carried on board of the small craft.

The experimentation team succeeded in: - Integrating broadband MIO network on-the-move for small craft Rad/nuc network-controlled detection and ship-to-ship broadband networking in the open waters, -Proving feasibility of simultaneous interdiction and data sharing between boarding events conducted in the open waters, inside the bay, and Riverine area -Integrating unmanned assets, which actively participated in conducting drive-by detection with nuc/rad sensor onboard (Sea Fox) and relaying the Riverine network to the police boat on-the-move via the air balloon,--Achieving biometrics data sharing and alert propagation with the overseas site in Sweden and HLS response system in PANYNJ Center,-Achieving biometrics data sharing and alert propagation with the overseas site in Sweden and HLS response system in PANYNJ Center,

For more information please contact Dr. Bordetsky at abordets@nps.edu

CNO Distinguished Fellows Maritime Domain Awareness Workshop Held

On 25 and 26 October the Maritime Defense and Security research program hosted an executive interagency and industry workshop to review the most pressing issues related to maritime security and achieving MDA vision and goals. Senior executives from DHS, DoD, USCG, Navy Strategic Studies Group, IMO, DOT, NOAA, industry and CNA met to highlight outstanding research issues related to achieving goals in Maritime Domain Awareness and maritime security. The results of this workshop will shape the focus of the CNO's Distinguished Fellows program and maritime defense and security research programs in the National Defense Institute.

SITREP RETURNS

Welcome to the re-commissioning of SITREP, a monthly e-news brief covering the spectrum of maritime domain defense and security research. SITREP is produced by the Maritime Defense and Security Research program as part of the National Security Institute—a cooperative research institute whose members include the Naval Postgraduate School, University of California at Santa Barbara, and Lawrence Livermore National Laboratory. The purpose of the Maritime Defense and Security Research program is to conduct, coordinate and collaborate Maritime defense and security research, experimentation, and information exchange between partnership universities; federal, state, and local agencies; national laboratories; maritime industry, and international partners through the National Securit Institute**.** Each month SITREP will introduce at least two on-going maritime security research projects either from the National Security Institute or other research institutions or agencies. This month we provide a glimpse at a world-wide MIO at sea experimentation program and a library repository for issues related to maritime security. In addition, we will highlight upcoming symposia and conferences associated with maritime defense and security for our readership. If you would like to add an individual to, or be removed from our subscription list, please send an e-mail to Ms. Erin Elizondo at eliz@nps.edu.

Library Resources– Some New, Some Old

Greta Marlatt, Supervisory Librarian, Dudley Knox Library

The Homeland Security Digital Library (HSDL) continues to grow and provide highly useful resources related to all areas of interest to homeland security and defense researchers, including those interested in maritime protection and port security etc. A new restricted access section has been added to house FOUO, LES and other sensitive but unclassified materials. The site can be found at https://www.hsdl.org/ and we welcome contributions of materials for addition to the collection to help it grow and be even more viable.

The NPS Library's classified section has a web presence and maintains an MDA-related webpage on the SIPRNET and is pleased to announce the creation and launch of our new **NPS Research Database**. This new database allows users to search for and access classified and unclassified reports and theses done by NPS faculty and students. Both sources can be accessed on the SIPRNET from http://web.nps.navy.smil.mil/Knox/DKLindex.htm

A recently updated version of our unclassified "Sea Mines and Countermeasures" bibliography is also available at http://www.nps.edu/Library/Research/Bibliographies/index.html.

For more information or to contribute documents for addition into the HSDL, please contact Greta Marlatt at gmarlatt@nps.edu or gmarlatt@nps.navy.mil